

CHAPTER-2 | Polynomials

QUIZ PART-02

1. Which of the following is not a polynomial?

- A. $f(x) = 2$ B. $f(x) = 0$
C. $f(x) = x^2 + x + 1$ D. $f(x) = \sqrt{x} + 1$ (D)

Explanation: A polynomial must have non-negative integer exponents of the variable. $f(x) = \sqrt{x} + 1$ is not a polynomial because of the \sqrt{x} term, which has a fractional exponent.

2. What type of polynomial is $2x^2 + 1$?

- A. Linear
B. Quadratic
C. Triad
D. Constant (B)

Explanation: The given polynomial $2x^2 + 1$ is quadratic because it has a degree of 2, which is the characteristic of a quadratic polynomial.

3. The degree of the polynomial $x^2 + \sqrt{3}x + 1$:

- A. 0
B. 1
C. 2
D. 3 (C)

Explanation: The degree of the polynomial is determined by the highest power of x , which is 2 in this case.

4. Which of the following is a quadratic polynomial?

- A. $x^2 + 2x + 3$
B. $3x + 2$
C. $x^3 + 5x^2 + 6x + 7$
D. $x^4 + 2x + 1$ (A)

Explanation: $x^2 + 2x + 3$ is a quadratic polynomial because its highest exponent of x is 2.

5. Which of the following is a cubic polynomial?

- A. $x^2 + 3x + 4$
B. $x^3 + 2x^2 + 5$
C. $x^4 + 2x + 1$
D. $x + 3$ (B)

Explanation: $x^3 + 2x^2 + 5$ is a cubic polynomial because its highest exponent of x is 3.

6. What is the degree of the polynomial $x^3 + 5x^2 + 7x + 2$?

- A. 2
B. 1
C. 3
D. 4 (C)

Explanation: The degree of the polynomial is 3 because the highest exponent of x is 3.

7. Which of the following is the general form of a quadratic polynomial?

- A. $ax + b$
B. $ax^2 + bx + c$
C. $ax^3 + bx^2 + cx + d$
D. $ax^4 + bx^3 + cx^2 + dx + e$ (B)

Explanation: The general form of a quadratic polynomial is $ax^2 + bx + c$, where $a \neq 0$.

8. Which of the following is a constant polynomial?

- A. $5x + 3$
B. $x^2 + 1$
C. 6
D. $4x^2 + 2x$ (C)

Explanation: A constant polynomial is a polynomial that has only a constant term and no variables. 6 is a constant polynomial.

9. The degree of the polynomial $x^4 + 3x^3 - x^3 + 5$ is:

- A. 4
B. 3
C. 2
D. 1 (A)

Explanation: The degree of the polynomial is 4 because the highest exponent of x is 4.

10. Which of the following is a trinomial polynomial?

- A. $x^2 + 3x + 4$
B. $2x + 3$
C. $x^3 + x^2 + x + 5$
D. $x^4 + 2x + 7$ (A)

Explanation: A trinomial polynomial has exactly three terms. $x^2 + 3x + 4$ is a trinomial polynomial.